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1644

1600

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/397,342A

DATE: 07/22/2002
TIME: 13:58:26

p#18

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

```
 3 <110> APPLICANT: Adams, Sean
 4       Pan, James
 5       Zhong, Alan
 7 <120> TITLE OF INVENTION: UCP4
 9 <130> FILE REFERENCE: P1626R1
11 <140> CURRENT APPLICATION NUMBER: US 09/397,342A
12 <141> CURRENT FILING DATE: 1999-09-15
14 <150> PRIOR APPLICATION NUMBER: US 60/101,279
15 <151> PRIOR FILING DATE: 1998-09-22
17 <150> PRIOR APPLICATION NUMBER: US 60/114,223
18 <151> PRIOR FILING DATE: 1998-12-30
20 <150> PRIOR APPLICATION NUMBER: US 60/129,674
21 <151> PRIOR FILING DATE: 1999-04-16
23 <160> NUMBER OF SEQ ID NOS: 18
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 323
27 <212> TYPE: PRT
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
31 Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln
32  1           5                  10                  15
34 Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala
35              20                  25                  30
37 Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr
38              35                  40                  45
40 Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp
41              50                  55                  60
43 Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala
44              65                  70                  75
46 Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly
47              80                  85                  90
49 Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg
50              95                  100                 105
52 Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser
53              110                 115                 120
55 Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met
56              125                 130                 135
58 Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
59              140                 145                 150
61 Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly
62              155                 160                 165
64 Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile
65              170                 175                 180
```

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```
67  Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro
68                  185                 190                 195
70  Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr
71                  200                 205                 210
73  Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu
74                  215                 220                 225
76  Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu
77                  230                 235                 240
79  Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg
80                  245                 250                 255
82  Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr
83                  260                 265                 270
85  Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly
86                  275                 280                 285
88  Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met
89                  290                 295                 300
91  Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg
92                  305                 310                 315
94  Glu Met Ser Gly Val Ser Pro Phe
95                  320
97  <210> SEQ ID NO: 2
98  <211> LENGTH: 1039
99  <212> TYPE: DNA
100 <213> ORGANISM: Homo sapiens
102 <400> SEQUENCE: 2
103   ccgagctcgg atcccgttat cgtcttgcgc tactgctgaa tgtccgtccc 50
105   ggaggaggag gagaggcttt tgccgctgac ccagagatgg ccccgagcga 100
107   gcaaattcct actgtccggc tgcgcggcta ccgtggccga gctagcaacc 150
109   tttcccctgg atctcacaaa aactcgactc caaatgcaag gagaagcagc 200
111   tcttgctcgg ttgggagacg gtgcaagaga atctgccccc tatagggggaa 250
113   tggtgcgcac agccctaggg atcattgaag aggaaggctt tctaaagctt 300
115   tggcaaggag tgacacccgc catttacaga cacgtagtgt attctggagg 350
117   tcgaatggtc acatatgaac atctccgaga ggttgtgttt ggcaaaagtg 400
119   aagatgagca ttatcccctt tggaaatcag tcattggagg gatgatggct 450
121   ggtgttattg gccagttttt agccaatcca actgacctag tgaaggttca 500
123   gatgcaaatg gaaggaaaaa ggaaactgga aggaaaacca ttgcgatttc 550
125   gtggtgtaca tcatgcattt gcaaaaatct tagctgaagg aggaatacga 600
127   gggctttggg caggctgggt acccaatata caaagagcag cactggtgaa 650
129   tatgggagat ttaaccactt atgatacagt gaaacactac ttggtattga 700
131   atacaccact tgaggacaat atcatgactc acggtttatc aagtttatgt 750
133   tctggactgg tagcttctat tctgggaaca ccagccgatg tcatcaaaag 800
135   cagaataatg aatcaaccac gagataaaca aggaagggga cttttgtata 850
137   aatcatcgac tgactgcttg attcaggctg ttcaaggtga aggattcatg 900
139   agtctatata aaggcttttt accatcttgg ctgagaatga ccccttggtc 950
141   aatggtgttc tggcttactt atgaaaaaat cagagagatg agtggagtca 1000
143   gtccatttta agaattctgc agatatccat cacactggc 1039
145 <210> SEQ ID NO: 3
146 <211> LENGTH: 31
147 <212> TYPE: DNA
```

RAW SEQUENCE LISTING   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:26

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

C--> 148 <213> ORGANISM: Artificial
     150 <220> FEATURE:
W--> 151 <221> NAME/KEY: Misc-feature
     152 <222> LOCATION: 1-31
     153 <223> OTHER INFORMATION: Sequence is synthesized
     155 <400> SEQUENCE: 3
     156 cgcggatccc gttatcgtct tgcgctactg c 31
     158 <210> SEQ ID NO: 4
     159 <211> LENGTH: 34
     160 <212> TYPE: DNA
C--> 161 <213> ORGANISM: Artificial
     163 <220> FEATURE:
W--> 164 <221> NAME/KEY: Misc-feature
     165 <222> LOCATION: 1-34
     166 <223> OTHER INFORMATION: Sequence is synthesized
     168 <400> SEQUENCE: 4
     169 gcggaattct taaaatggac tgactccact catc 34
     171 <210> SEQ ID NO: 5
     172 <211> LENGTH: 1248
     173 <212> TYPE: DNA
C--> 174 <213> ORGANISM: Artificial
     176 <220> FEATURE:
W--> 177 <221> NAME/KEY: Misc-feature
     178 <222> LOCATION: 1-1248
     179 <223> OTHER INFORMATION: Sequence is synthesized
     181 <220> FEATURE:
     182 <221> NAME/KEY: unsure
     183 <222> LOCATION: 1231
     184 <223> OTHER INFORMATION: unknown base
     186 <400> SEQUENCE: 5
     187 cgttatcgtc ttgcgctact gctgaatgtc cgtcccggag gaggaggaga 50
     189 ggcttttgcc gctgacccag agatggcccc gagcgagcaa attcctactg 100
     191 tccggctgcg cggctaccgt ggccgagcta gcaacctttc ccctggatct 150
     193 cacaaaaact cgactccaaa tgcaaggaga agcagctctt gctcggttgg 200
     195 gagacggtgc aagagaatct gccccctata ggggaatggt gcgcacagcc 250
     197 ctagggatca ttgaagagga aggctttcta aagctttggc aaggagtgac 300
     199 acccgccatt tacagacacg tagttatttc tggaggtcga atggtcacat 350
     201 atgaacatct ccgagaggtt gtgtttggca aaagtgaaga tgagcattat 400
     203 cccctttgga aatcagtcat tggagggatg atggctggtg ttattggcca 450
     205 gtttttagcc aatccaactg acctagtgaa ggttcagatg caaatggaag 500
     207 gaaaaaggaa actggaagga aaaccattgc gatttcgtgg tgtacatcat 550
     209 gcatttgcaa aaatcttagc tgaaggagga atacgaaggc tttgggcagg 600
     211 ctgggtaccc aatatacaaa gagcagcact ggtgaatatg ggagatttaa 650
     213 ccacttatga tacagtgaaa cactacttgg tattgaatac accacttgag 700
     215 gacaatatca tgactcacgg tttatcaagt ttatgttctg gactggtagc 750
     217 ttctattctg ggaacaccag ccgatgtcat caaaagcaga ataatgaatc 800
     219 aaccacgaga taaacaagga aggggacttt tgtataaatc atcgactgac 850
     221 tgcttgattc aggctgttca aggtgaagga ttcatgagtc tatataaagg 900
     223 cttttttacca tcttggctga gaatgacccc ttggtcaatg gtgttctggc 950

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        225  ttacttatga aaaaatcaga gagatgagtg gagtcagtcc attttaaacc 1000
        227  cctaaagatg caacccttaa agatacagtg ttcagtatta ttgaaatatg 1050
        229  ggcatctgca acacataccc cctattattt ctacctcttt aggaagacac 1100
        231  ctattccaca gagactgatt tatagggggc agcactttat tttttctgg  1150
        233  aaacccaagt tctctttgac tcctcttttt gtccaaaagt gatctggtcg 1200
W--> 235  gatctcacaa ggccatccaa tgagaccccg nacagcattt tctaaaga  1248
        237  <210> SEQ ID NO: 6
        238  <211> LENGTH: 58
        239  <212> TYPE: DNA
C--> 240  <213> ORGANISM: Artificial
        242  <220> FEATURE:
W--> 243  <221> NAME/KEY: Misc-feature
        244  <222> LOCATION: 1-58
        245  <223> OTHER INFORMATION: Sequence is synthesized
        247  <400> SEQUENCE: 6
        248  cgcggatccg aaatggacta caaggacgac gatgacaagt ccgtcccgga 50
        250  ggaggagg  58
        252  <210> SEQ ID NO: 7
        253  <211> LENGTH: 35
        254  <212> TYPE: DNA
C--> 255  <213> ORGANISM: Artificial
        257  <220> FEATURE:
W--> 258  <221> NAME/KEY: Misc-feature
        259  <222> LOCATION: 1-35
        260  <223> OTHER INFORMATION: Sequence is synthesized
        262  <400> SEQUENCE: 7
        263  gcgaagcttg ccatggttgg actgaagcct tcaga 35
        265  <210> SEQ ID NO: 8
        266  <211> LENGTH: 33
        267  <212> TYPE: DNA
C--> 268  <213> ORGANISM: Artificial
        270  <220> FEATURE:
W--> 271  <221> NAME/KEY: Misc-feature
        272  <222> LOCATION: 1-33
        273  <223> OTHER INFORMATION: Sequence is synthesized
        275  <400> SEQUENCE: 8
        276  cgcgaattct caaaacggtg attcccgtaa cat 33
        278  <210> SEQ ID NO: 9
        279  <211> LENGTH: 61
        280  <212> TYPE: DNA
C--> 281  <213> ORGANISM: Artificial
        283  <220> FEATURE:
W--> 284  <221> NAME/KEY: Misc-feature
        285  <222> LOCATION: 1-61
        286  <223> OTHER INFORMATION: Sequence is synthesized
        288  <400> SEQUENCE: 9
        289  gcgaagcttg ccatggacta caaggacgac gatgacaagg ttggactgaa 50
        291  gccttcagac g 61
        293  <210> SEQ ID NO: 10
```

```
      294 <211> LENGTH: 19
      295 <212> TYPE: DNA
C--> 296 <213> ORGANISM: Artificial
      298 <220> FEATURE:
W--> 299 <221> NAME/KEY: Misc-feature
      300 <222> LOCATION: 1-19
      301 <223> OTHER INFORMATION: Sequence is synthesized
      303 <400> SEQUENCE: 10
      304  aatgcctatc gccgaggag 19
      306 <210> SEQ ID NO: 11
      307 <211> LENGTH: 20
      308 <212> TYPE: DNA
C--> 309 <213> ORGANISM: Artificial
      311 <220> FEATURE:
W--> 312 <221> NAME/KEY: Misc-feature
      313 <222> LOCATION: 1-20
      314 <223> OTHER INFORMATION: Sequence is synthesized
      316 <400> SEQUENCE: 11
      317  gtaggaactt gctcgtccgg 20
      319 <210> SEQ ID NO: 12
      320 <211> LENGTH: 22
      321 <212> TYPE: DNA
C--> 322 <213> ORGANISM: Artificial
      324 <220> FEATURE:
W--> 325 <221> NAME/KEY: Misc-feature
      326 <222> LOCATION: 1-22
      327 <223> OTHER INFORMATION: Sequence is synthesized
      329 <400> SEQUENCE: 12
      330  tgctcgcgct cacgcagaga tg 22
      332 <210> SEQ ID NO: 13
      333 <211> LENGTH: 24
      334 <212> TYPE: DNA
C--> 335 <213> ORGANISM: Artificial
      337 <220> FEATURE:
W--> 338 <221> NAME/KEY: Misc-feature
      339 <222> LOCATION: 1-24
      340 <223> OTHER INFORMATION: Sequence is synthesized
      342 <400> SEQUENCE: 13
      343  gaaatcgtgc gtgacatcaa agag 24
      345 <210> SEQ ID NO: 14
      346 <211> LENGTH: 23
      347 <212> TYPE: DNA
C--> 348 <213> ORGANISM: Artificial
      350 <220> FEATURE:
W--> 351 <221> NAME/KEY: Misc-feature
      352 <222> LOCATION: 1-23
      353 <223> OTHER INFORMATION: Sequence is synthesized
      355 <400> SEQUENCE: 14
      356  ctccttctgc atcctgtcag caa 23
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:27

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 1231

<u>Invalid <213> Response:</u>
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15